

## NEW GALL MIDGES.

BY E. P. FELT, ALBANY, N. Y.

Below are given descriptions of a miscellaneous lot of gall midges showing a varied food habit and originating in widely separated portions of the world.

***Dasyneura sassafras*, n. sp.**

The midge described below was reared by W. A. Ross, August 12, 1915, from larvæ curling sassafras foliage at Gordon, Ont., and submitted for identification by Arthur Gibson, Chief Assistant Entomologist of the Department of Agriculture, Ottawa, Can. The species runs in our key to *D. apicata* Felt, noticed in detail on page 152 of New York State Museum Bulletin 175. It is easily separated from this form and also the somewhat similar *Dasyneura smilacifolia* Felt by structural and colorational characters.

*Female*—Length .75 mm. Antennæ extending to the second abdominal segment, sparsely haired dark brown; 16 sessile segments, the fifth with a length two and one-half times its diameter, the terminal segment compound, with a length four to five times its diameter and a more or less distinct constriction near the middle. Palpi; first segment subquadrate, irregular, the second with a length more than twice its diameter, the third a little longer than the second, more slender, the fourth one-half longer than the third, more slender. Mesonotum light yellowish brown, the submedian lines and scutellum yellowish, postscutellum reddish yellow. Abdomen sparsely haired, pale yellowish. Wings hyaline; halteres pale yellowish. Coxæ and femora mostly pale yellowish, the distal portion of femora, tibiæ and tarsi dark brown, the tarsi almost black; claws slender, strongly curved, the pulvilli nearly as long as the claws. Ovipositor pale yellowish, fuscous apically, as long as the abdomen, the terminal lobes with a length nearly four times the width, broadly rounded and sparsely setose apically. Type Cecid. a2676.

***Dasyneura gossypii*, n. sp.**

The small midges described below were forwarded under date of July 7, 1915, by Prof. T. Bainbrigg Fletcher, Imperial Entomologist of the Agricultural Research Institute, Pusa, Bihar,

India. Both sexes are figured on page 363 of his work on South Indian Insects and the species is considered by him as of minor importance. He states that the insect is locally known as the cotton flower bud maggot and the larvæ are recorded as inhabiting cotton buds, causing them to burst and drop. Pupation occurs in the withering buds.

*Female*—Length .75 mm. Antennæ extending nearly to the base of the abdomen, sparsely haired, pale yellowish, yellowish basally; 12 sessile segments, the fifth with a length about two and one-half times its diameter; terminal segment somewhat produced, with a length three times its diameter and tapering to a broadly rounded apex. Palpi: first segment subquadrate, the second twice the length of the first, more slender, the third three times the length of the second, somewhat dilated, the fourth about three-fourths the length of the third, more slender. Head yellowish, eyes black. Mesonotum pale yellowish brown. Scutellum and postscutellum yellowish. Abdomen yellowish brown, tapering. Wings hyaline; halteres, coxæ, femora and most of the tibiæ whitish transparent, the tarsi mostly pale yellowish, the pulvilli as long as the slender, strongly curved claws. Ovipositor with a length nearly equal to the body, the terminal lobes slender, with a length about four times the width. Type Cécid. a2678.

### **Walshomyia texana, n. sp.**

The midges described below were reared by Mrs. L. T. Binkley, Instructor in Zoology, State University, Austin, Texas, from a bud gall on the wild Texas or Mountain Cedar (*Sabina sabinoides*). The species is quite distinct from *W. juniperina* Felt, reared from the fruit of *Juniperus californica*, and while it presents some differences from the generic type, we believe that it should be referred to this genus.

*Gall*—This appears to be nothing but an enlarged, brownish bud with a length approximately 6 mm., diameter 5 mm.

*Male*—Length 2.2 mm. Antennæ extending to the fourth abdominal segment, sparsely haired, pale yellowish; 15 or 16 segments, the fifth with a stem one-half the length of the cylindric basal enlargement, which latter has a length one-half greater than its diameter and tapers slightly distally; circumfilii probably

reticulate apically, though not visible in the preparation; terminal segment produced, with a length four times its diameter and tapering to a broadly rounded apex. Palp consisting of one irregularly, broadly oval segment bearing a few stout setae subapically; eyes large, black, nearly contiguous. Mesonotum a nearly uniform fuscous yellowish. Scutellum yellowish transparent, postscutellum and abdomen light fuscous yellowish and sparsely clothed with fuscous setae. Wings hyaline: halteres yellowish basally, fuscous apically. Coxae, a light fuscous yellowish; femora, tibiae and tarsi a nearly uniform light fuscous straw; claws stout, heavily curved, simple, the pulvilli more than twice the length of the claws, greatly expanded. Genitalia fuscous; basal clasp segment stout, broad; terminal clasp segment moderately long, swollen near the middle and tapering uniformly to the obtuse apex and the irregular base; dorsal plate long, broad, deeply and triangularly emarginate, the lobes narrowly rounded and sparsely setose; ventral plate long, broad, broadly rounded apically. Harpes apparently represented by divergent, broad, slightly chitinated, submedian processes, obliquely truncate and narrowly rounded distally.

*Female*—Length 3 mm. Antennae extending to the second abdominal segment, sparsely haired, fuscous yellowish; 14 or 15 subsessile segments, the fifth with a length about twice its diameter, a subbasal whorl of moderately short, stout setae and subapically low, very irregularly reticulate circumfili forming three or four transverse bands (circumfili distinctly visible in only one specimen, a2694); terminal segment compound, consisting of two or three segments, closely fused and with a length three to five times its diameter; eyes large, black. Mesonotum dark yellowish brown. Scutellum and postscutellum a little lighter. Abdomen yellowish white, sparsely clothed with fuscous hairs. Ovipositor short, stout, the terminal segment with a length one-half greater than its diameter, slightly and variably chitinated basally and ventrally, the terminal lobes broad, broadly rounded and sparsely setose. Other characters nearly as in the male. Type Cecid. a 2693.

***Asphondylia sesami*, n. sp.**

The Gingelly gall fly, according to Prof. T. Bainbrigge Fletcher, Imperial Entomologist of the Agricultural Research

Institute, Pusa, Bihar, India, attacks young Gingelly (*Sesamum indicum*) capsules, producing a wrinkled, twisted gall instead of the fruit. He has figured the adult and gall on page 364 of his work on South Indian Insects, 1914, and classifies this insect as one of the minor pests. He has kindly placed reared specimens, which were labeled South India, Coimbatore, June, 1912, and 1913. at our disposal, and the species is described as new.

*Exuvium*—Length 4 mm., a nearly uniform chestnut brown except for the nearly transparent antennal cases, the latter extending to the base of the second abdominal segment, the wing cases to the fourth, and the leg cases to the sixth abdominal segment. The dorsum of the abdominal segments with a scattering, and on segments five to eight, respectively, a somewhat double, transverse row of short, stout spines near the basal third and a similar, single row of rather thickly-set, almost contiguous, longer, stout spines near the middle; terminal segment with the basal row of spines distinctly double and scattering, and the distal row irregular, there being three on each side of the median line and a compound, lateral, spiny process.

*Male*—Length 3 mm. Antennæ extending to the fourth abdominal segment, sparsely haired, light brown; 14 segments, the fifth with a length seven times its diameter, the twelfth with a length nearly five times its diameter, the thirteenth and fourteenth segments missing. Palpi; the first segment irregularly and roundly quadrate, with a length nearly twice its diameter, the second greatly produced, slender, sparsely setose, and with a length nearly three times that of the first. The mesonotum slaty brown, the submedian lines sparsely haired. Scutellum fuscous yellowish brown with a few setæ at the lateral angles, postscutellum a fuscous whitish. Abdomen sparsely haired, light brown, the genitalia fuscous yellowish. Wings hyaline, costa pale straw; halteres basally and apically mostly whitish transparent, the stalk dark brown. Coxæ and femora reddish brown, the tibiæ and tarsi mostly pale straw; claws long, rather slender, the pulvilli as long as the claws. Genitalia; basal clasp segment short, greatly swollen; terminal clasp segment subapical, short, greatly swollen apically and distinctly bidentate; dorsal plate short, broad, broadly and roundly emarginate. Other structures indistinct in the preparation.

*Female*—Length 3 mm. Antennæ extending to the third abdominal segment, the fifth with a length five times its diameter, the twelfth with a length two and one-half times its diameter, the thirteenth with a length about equal to the diameter, the fourteenth reduced, globose. Palpi; the first segment quadrate, with a length about twice its diameter, the second more slender, irregular and with a length about twice the first. Mesonotum dark slaty brown, the submedian lines rather thickly haired. Scutellum reddish brown, sparsely setose apically, postscutellum dark brown. Abdomen reddish brown, sparsely clothed with silvery setæ. Wings hyaline; halteres mostly yellowish brown, slightly darker subapically. Coxæ and legs mostly brownish straw, the distal tarsal segments somewhat darker; claws moderately stout, strongly curved, the pulvilli a little longer than the claws. Ovipositor when extended probably longer than the body, the basal segment moderately slender and with a well developed dorsal pouch, the acicula slender, acute. Type Cecid. a 2677.

***Feltiella americana*, n. sp.**

The midges described below were received from Prof. P. J. Parrott, of the Agricultural Experiment Station, Geneva, N. Y., under date of July 31, 1915, accompanied by the statement that they were reared from larvæ apparently feeding on a red mite occurring upon plum foliage. This species is quite different from an earlier described American form.

*Male*—Length 1.5 mm. Antennæ a little longer than the body, thickly haired, mostly whitish transparent; circumfili and numerous long setæ a light fuscous; 14 segments, the fifth having the stems with a length two and one-half and three and one-half times their diameters, respectively; terminal segment, basal portion of the stem with a length four times its diameter, the distal enlargement subcylindric, with a length two and one-half times its diameter, broadly rounded apically. Palpi; the first segment irregular, subquadrate, the second with a length about three times its width, the third a little longer, more slender, the fourth one-fourth longer than the third, more slender. Mesonotum fuscous yellowish. Scutellum and postscutellum pale yellowish. Abdomen mostly pale yellowish, slightly fuscous basally. Wings hyaline, the third vein uniting with costa at the apex of the wing, halteres

pale yellowish. Coxæ whitish transparent, the legs a fuscous whitish transparent; claws slender, strongly curved, the anterior and mid-pair unidentate, the pulvilli about two-thirds the length of the claws. Genitalia; basal clasp segment moderately long, stout, the basal lobe long, triangular, finely setose; terminal clasp segment long, slender; dorsal plate short, triangularly emarginate, the lobes obliquely and roundly truncate, the ventral plate long, broad, truncate or slightly emarginate apically; style long, stout, roundly acute apically.

*Female*—Length 1.5 mm. Antennæ nearly as long as the body, sparsely haired, fuscous yellowish; 14 segments, the fifth with a stem one-third the length of the cylindric basal enlargement, which latter has a length about two and one-half times its diameter; terminal segment slightly produced and tapering to a broadly rounded apex. Mesonotum dark yellowish brown. Scutellum and postscutellum yellowish. Abdomen a light fuscous yellowish. Halteres yellowish. Coxæ and femora basally yellowish white, the distal portion of femora and tibiæ a light fuscous straw, the tarsi darker. Ovipositor short, the terminal lobes irregularly ovate and rather thickly setose. Other characters practically as in the male. Type Cecid. a2679.

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## NOTES AND QUERIES.

### NOTES FROM CLEMSON COLLEGE, S.C.

On Aug. 8th a large number of specimens of *Anosia plexippus* were taken in a pasture near the College. They were the stragglers of a swarm of this species passing through on that date. They disappeared two days later.

There was an outbreak of Army Worms (*Laphygma frugiperda*) in August. The principal disturbance occurred throughout the northern and eastern counties of the State. As usual, the attack began on crab grass and sorghum. In some sections peas were slightly damaged. The generation went into pupation Aug. 20-30, having done no serious damage. During this outbreak the larvæ of *Calosoma calidum* played an unusually conspicuous role. They